

Remarks

The Office Action of April 18, 2006, and the references cited therein have been carefully considered.

Although it is still believed that the claims as previously presented are allowable over the patent to Cotter cited by the Examiner, and although the previously presented claims are believed to be allowable over the combination of the Cotter and Liander patents cited by the Examiner in rejecting the claims, the claims have been amended to even more precisely define the invention and clearly define same over the cited prior art. In particular, claim 1 has been amended to incorporate the limitations of claims 4 and 8, Independent claims 9 and 18 have been amended to essentially incorporate the limitations of claim 4, claim 8 has been amended so that it now depends from claim 9 and a new claim 21 dependent on claim 18 and containing the limitations of claim 8 has been added. Additionally, claims 8 and 12 have been amended to more precisely define the claimed feature, and claims 4 and 13 have been cancelled.

Reconsideration of the rejection of all of the claims as being unpatentable over the patent to Cotter in view of the newly cited patent to Liander is respectfully requested. In urging this ground of rejection, the Examiner has taken the position that the Cotter patent discloses all of the claimed limitations except for a constant diameter stripper opening, that the Liander patent shows a punch with a constant diameter stripper opening, and that consequently it would be obvious to provide the Cotter punching arrangement with a constant diameter stripper opening as taught by Liander and arrive at Applicants claimed invention. This conclusion of the Examiner is respectfully traversed. It is submitted that not only would the combination of these two references not be obvious to one skilled in the art, but moreover, any resulting combination would not result in applicants claimed invention.

The present invention as recited in all of the claims is directed to a punch for green sheets, wherein a stripper bore or opening with a constant diameter is provided and the punching portion (26) of the die, which has very small diameter less than the diameter of the stripper opening or bore (24) is disposed within the stripper opening. The length of the punching portion (26) is less than the length of the

stripper bore, so that the intermediate larger diameter portion (25) always extends into and is guided by the wall of the stripper bore (24) disposed in the stripper (21). Thus, within the stripper bore, the smaller diameter punching portion (26) is spaced from the wall of the stripper bore (24), while intermediate die portion (25) slides along the wall or surface of the stripper opening to provide guidance near the punching portion of the die. Finally, the remainder of the three part stepped die, i.e., the shaft (15), has a diameter that is greater than the diameters of the punching and intermediate portions (26, 25), and thus greater than the stripper opening, and is guided by a die guide. It is submitted that this combination of features is not obvious from the Cotter patent either alone or in combination with the Liander patent.

The differences between the present invention and the Cotter patent have been extensively previously discussed and those discussions are still pertinent here and are incorporated by reference. In summary, the Cotter punch does not have a stripper opening that is longer than the length of the punching portion. Rather, the constant diameter stripper opening of Cotter, i.e., the unnumbered opening at the bottom of the stripper 93', is shorter than the length of the punching portion (26) of Cotter. Moreover the diameter of the stripper opening of Cotter is less than that of the intermediate portion (28) of Cotter so that the intermediate portion (28) can not enter the stripper opening. In this regard, it is noted that in the Office Action, the Examiner has indicated that the shaft of Cotter has the reference numeral "34". However, numeral 34 corresponds to the piston of the gas spring for the die, with the largest diameter shaft portion of the die being supported in this piston for movement therewith. Additionally, the Examiner has indicated that the reference numeral 93' refers to the "stripper opening" whereas the Cotter patent states that 93 and 93' refer to the stripper itself and not to any opening in the stripper as recited in the claims. The only opening in the stripper 93' is the unnumbered opening at the bottom. Accordingly, it is submitted that for the above reasons, the Cotter patent does not show the features recited in each of the independent claims for which it was cited by the Examiner.

To even more clearly distinguish over the Cotter patent, claim 1 has been further amended to specifically recite that the diameter of the intermediate portion (25) of the die is smaller than the diameter of the shaft by a multiple of the diameter

of the shaft. This is clearly not the case according to the Cotter patent wherein the intermediate portion (28) has essentially the same diameter as the slightly larger portion of the die at the top of the die of Cotter. In fact the only reason for the slight increase in the diameter of die of Cotter is to seat the die in the piston 34. Accordingly, for this additional reason, claim 1 is allowable over the Cotter patent.

Claim 9 more positively recites that the intermediate portion (25) is guided by the surface (wall) of the stripper opening, while claim 18 recites that the intermediate portion extends into and is supported in a stripper bush (bushing). Such is clearly not the case in the device of Cotter wherein the only bushing through which the intermediate portion (28) extends is the bushing formed by the bore (86) in the end cap (82), which is not in the stripper 93'. This can be more clearly seen in Fig 3 which more clearly illustrates the portions of the stripper (93 or 93') and the end cap. Accordingly, for the above stated reasons it is submitted that all of the pending claims are allowable over the Cotter patent.

In the rejection, the Examiner took the position that the Cotter patent taught all of the limitations of the claims other than the constant diameter stripper opening, which the Examiner considers to be the entire interior space of the stripper and the end cap which have many different diameter portions. To overcome this deficiency of the Cotter patent the Examiner has cited the Liander patent as showing a constant diameter stripper opening and concluded that, from this teaching, it would be obvious to provide the Cotter patent with a constant diameter stripper opening. This conclusion by the Examiner is respectfully traversed.

Initially, it is pointed out that the Liander patent is concerned with a die having only two different diameter portions wherein the outermost surface provides the guidance. It is not seen how this would suggest to one skilled in the art to provide the Cotter arrangement with a constant diameter stripper surface. Moreover the Examiner has not indicated where in the Cotter device the constant diameter stripper opening would be located. That is, if one follows the teachings of Liander the constant diameter opening would have a diameter corresponding to the largest diameter portion of the die, which would probably render the Cotter device inoperable and would not result in the invention defined in the claims. Accordingly, it is submitted that since the Liander patent does not overcome the deficiencies of the

Cotter patent and since any combination of the Cotter and Liander patents, even if combining them could somehow be accomplished, would not result in the invention as defined in any of the independent claims, all of the pending claims are allowable.

Dependent claims 2, 3 and 5-8 are each dependent on claim 1 and therefore are allowable for at least the same reasons as that claim. Claims 8, 10-12 and 14-17 are dependent on claim 9 and thus are allowable for at least the same reasons as that claim. However, claim 8 specifically recites the relationship between the diameters of the shaft and intermediate portion as recited in claim 1 and discussed above. Moreover claim 12 specifically recites that the shaft is mounted in and guided by a bushing whereas the shaft of Cotter is fixedly mounted in a piston. Accordingly for these additional reasons claims 8 and 12 are allowable over the cited combination of references.

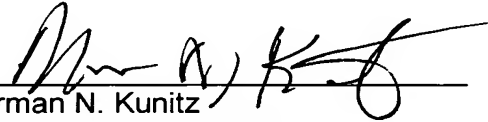
Finally, rejected claims 19- 20 and new claim 21 are dependent on claim 18, with claim 21 setting forth the diameter relationship recited in claims 1 and 8. Thus claim 21 is allowable for this additional reason.

In view of the above amendments and for the above stated reasons, it is submitted that all of the pending claims, i.e., claims 1-3, 5-12 and 14-21, are in condition for allowance. Such action and the passing of this application to issue are respectfully requested.

If the Examiner is of the opinion that the prosecution of the application would be advanced by a further personal interview, the Examiner is invited to telephone undersigned counsel to arrange for such an interview.

Respectfully submitted,

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